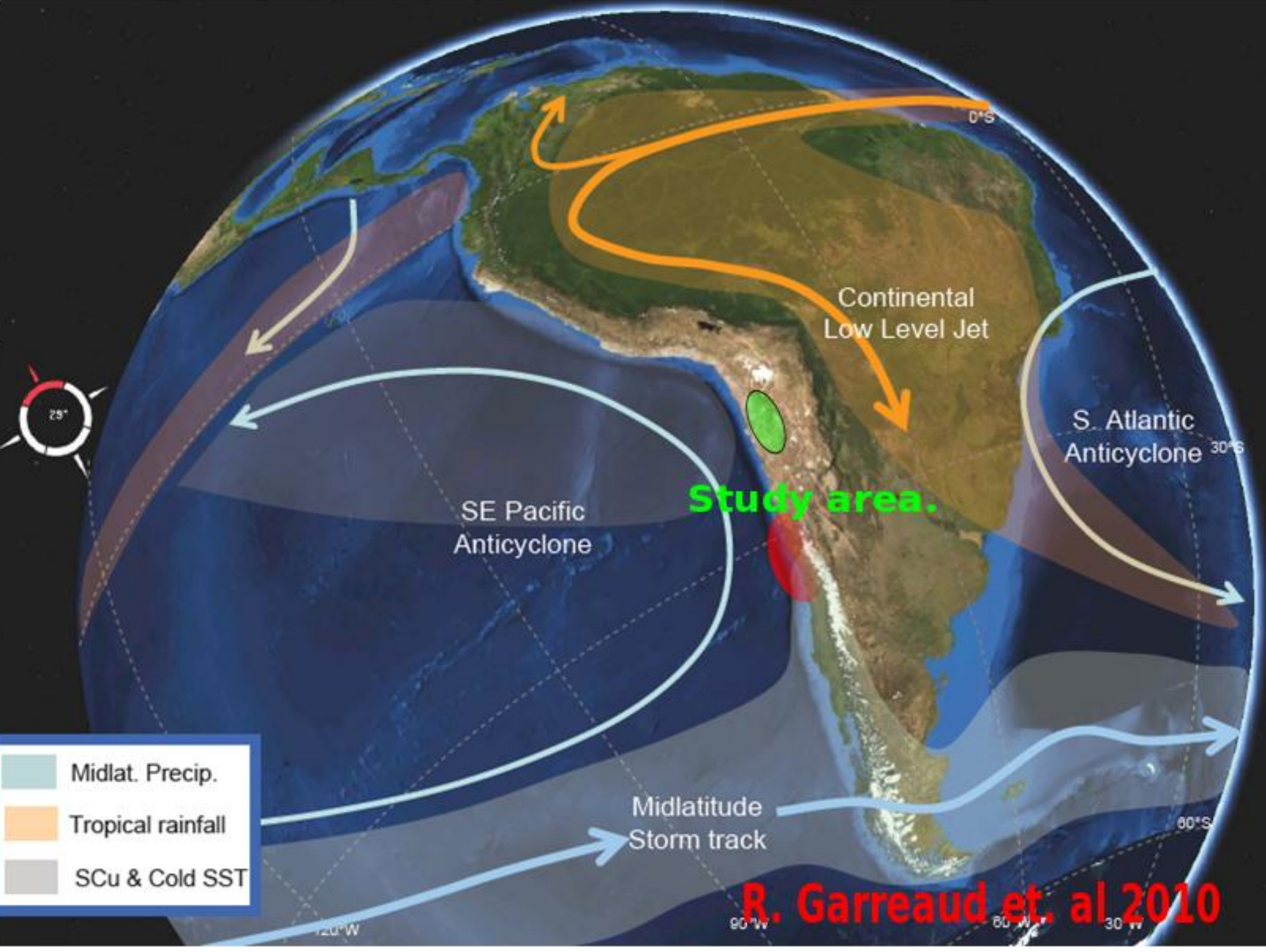




# II Jornadas IPERinas 2013

Aproximaciones Paleoambientales a la problemática de cambio climático en zonas áridas y semiaridas de Chile.

Matías Frugone Alvarez



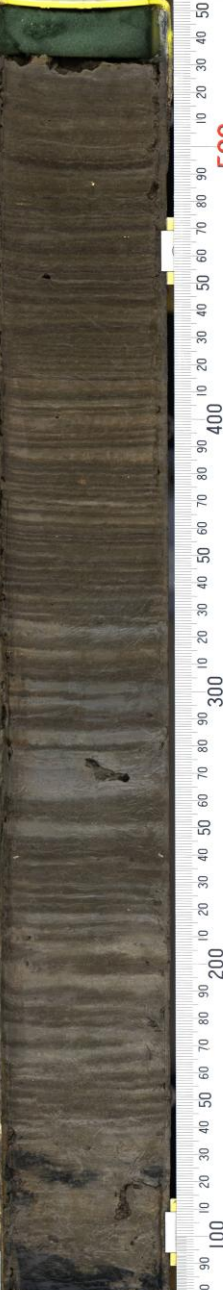
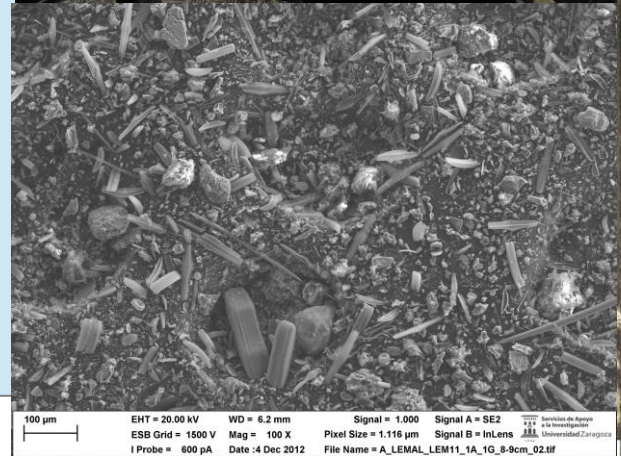
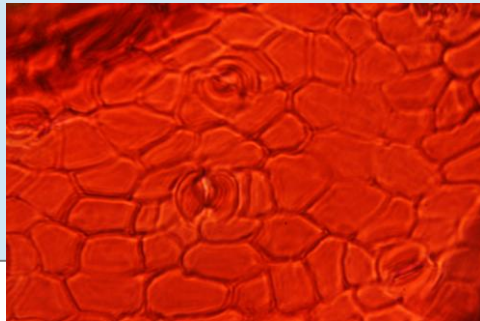


# Por que salimos tanto al campo...?

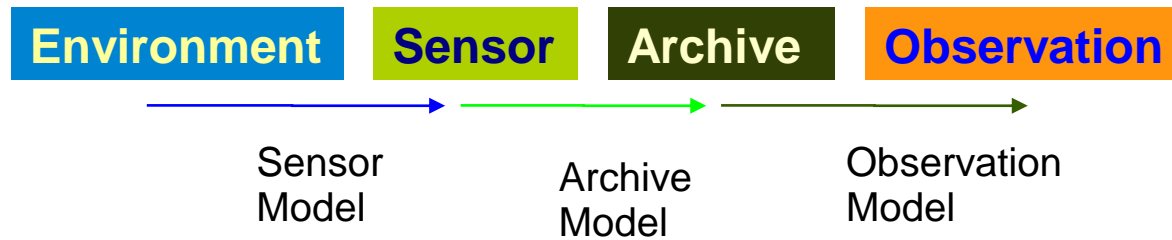
## El Proxy



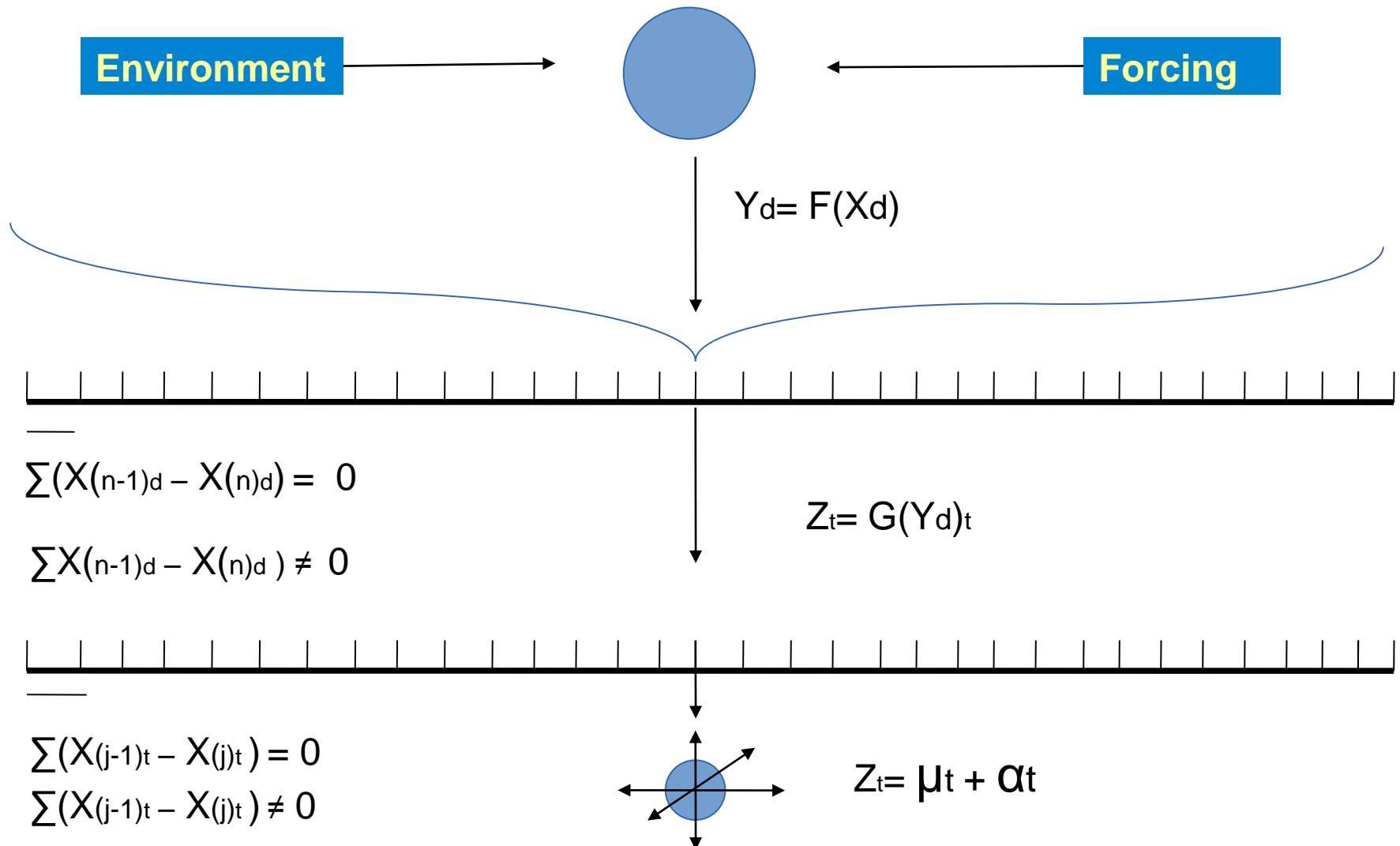
Plant macrofossils



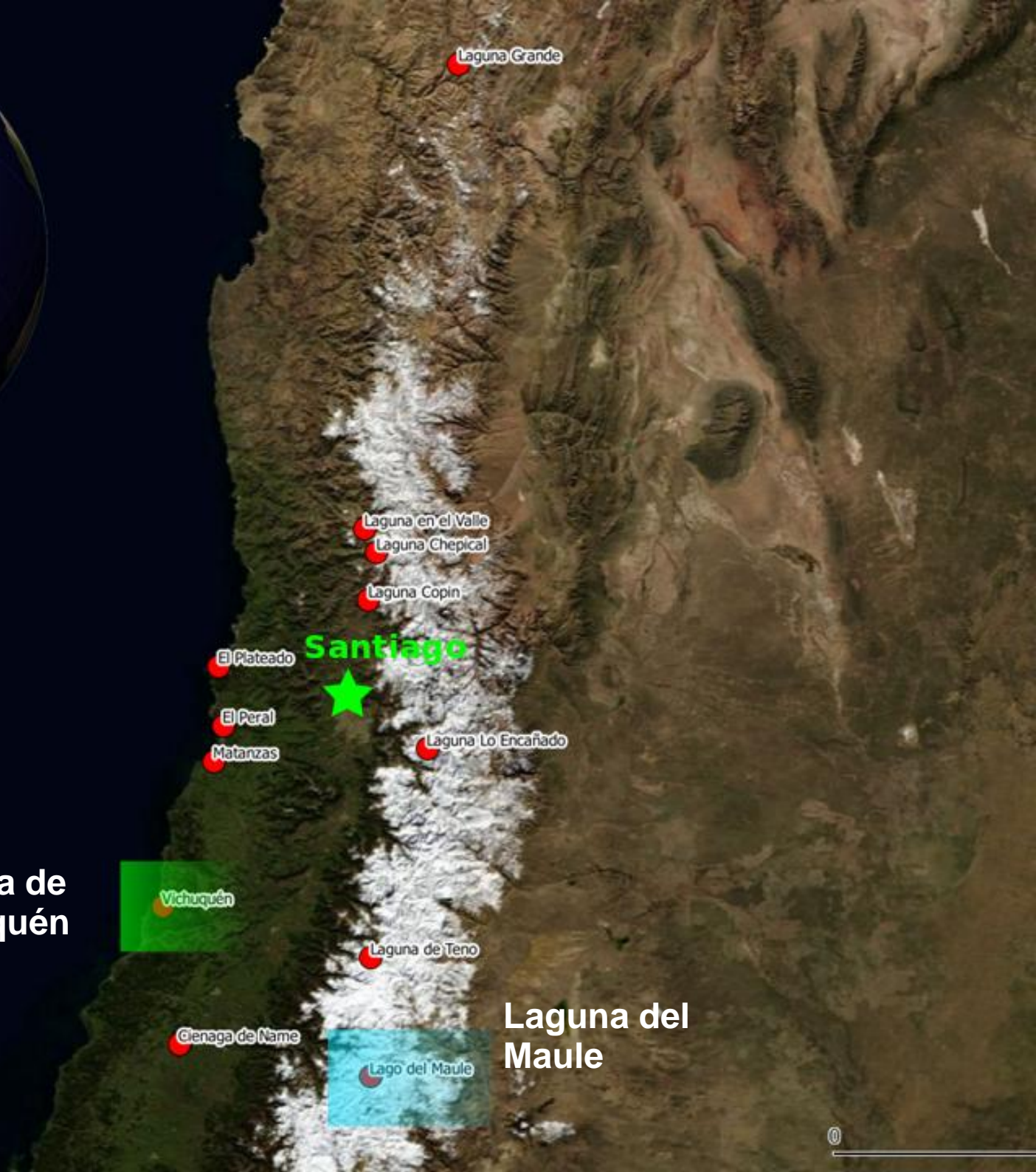
# PROXY SYSTEM MODEL.



M.N. Evans et al. 2013







Laguna de  
Vichuquén

Vichuquén

Santiago

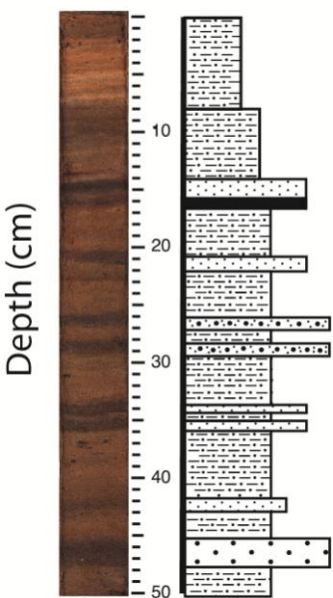
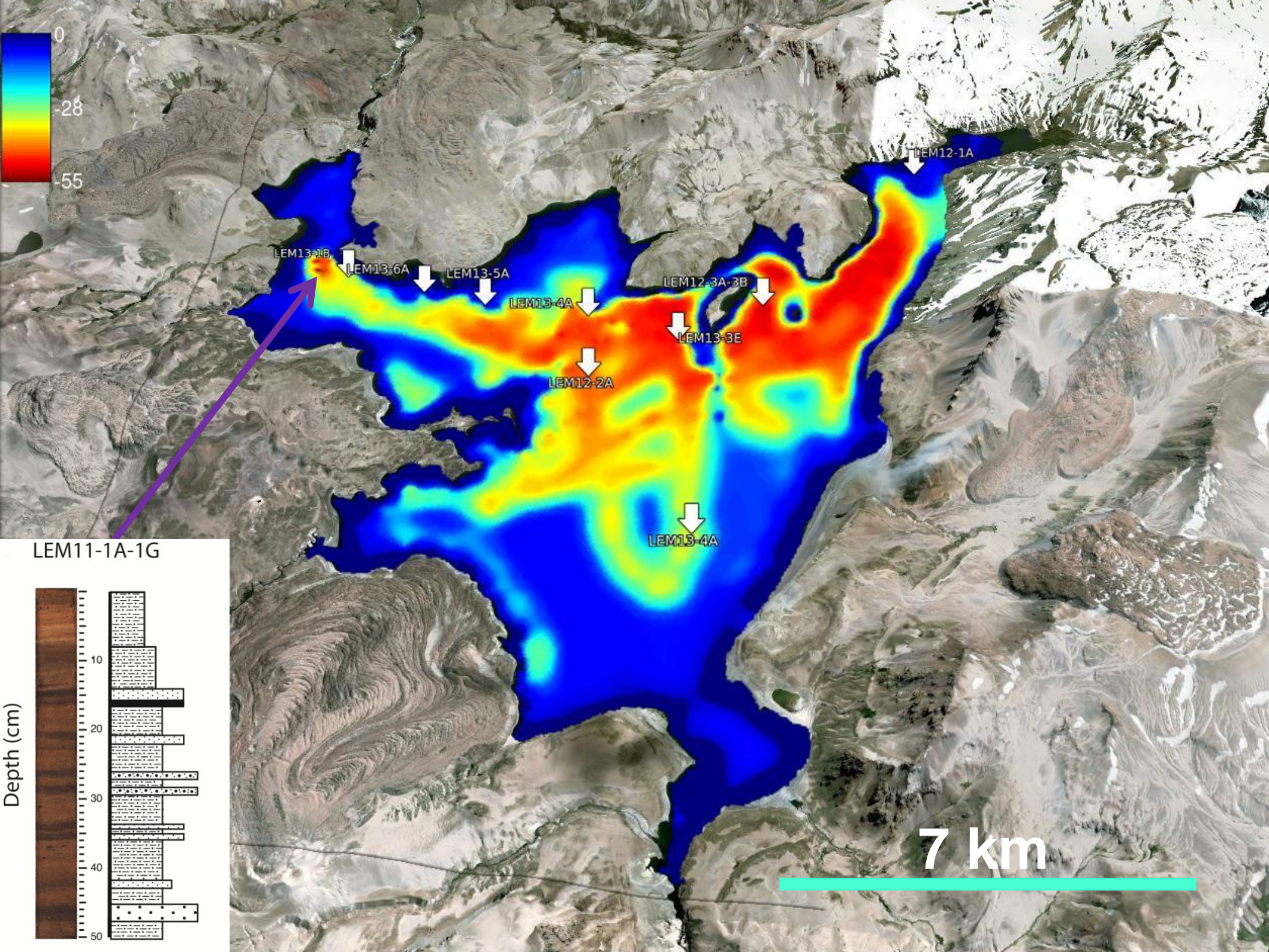


Laguna del  
Maule

Lago del Maule

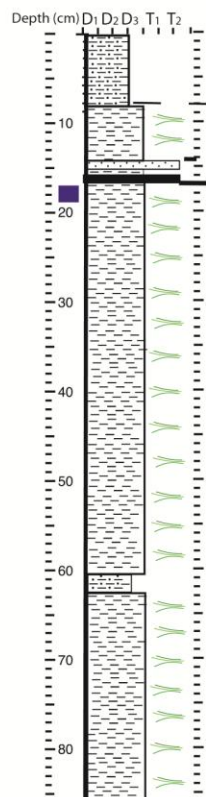




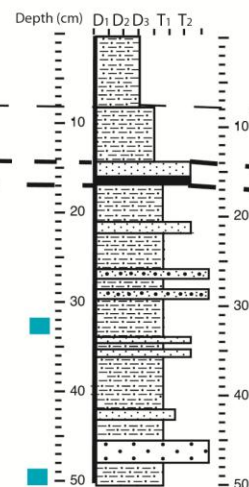




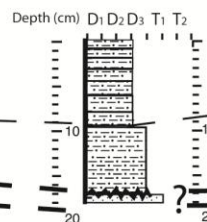
LEM11-3A-1G



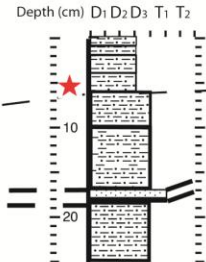
LEM11-1A-1G



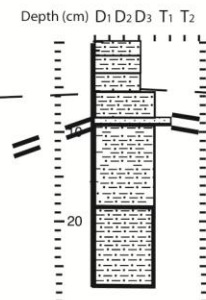
LEM11-2A-1G



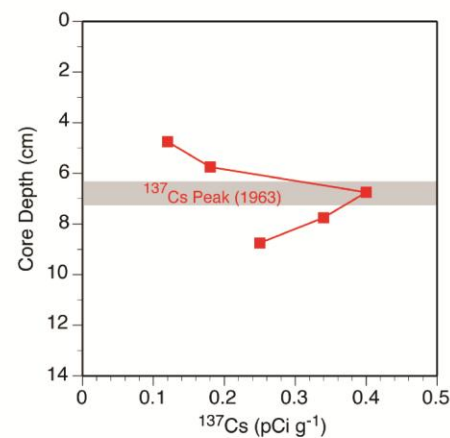
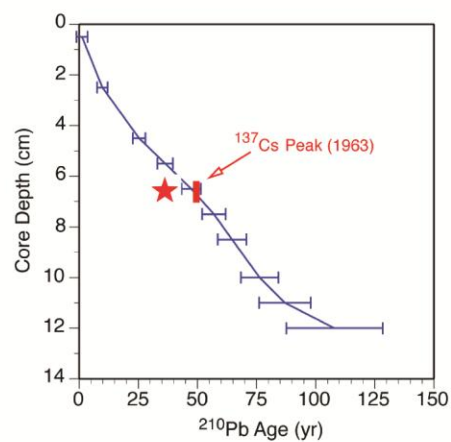
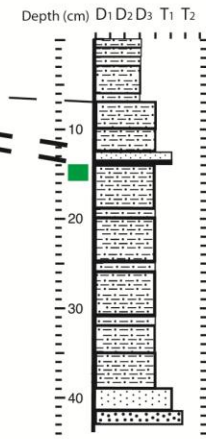
LEM12-3A-1G



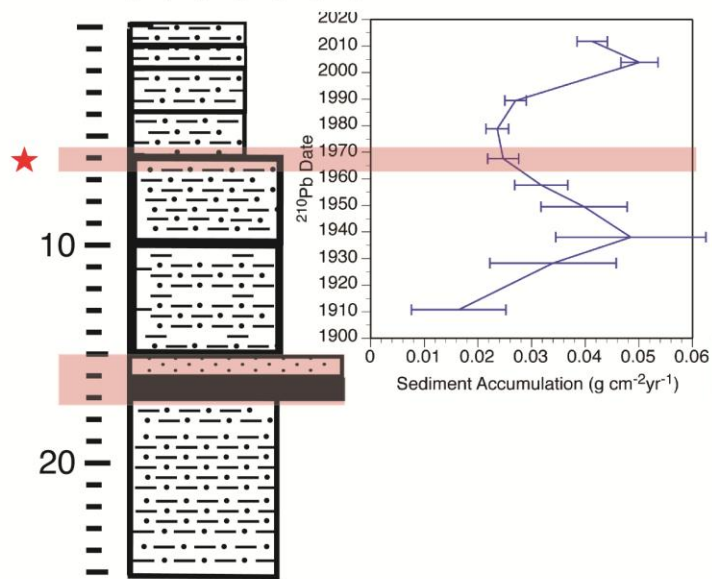
LEM12-4A-1G



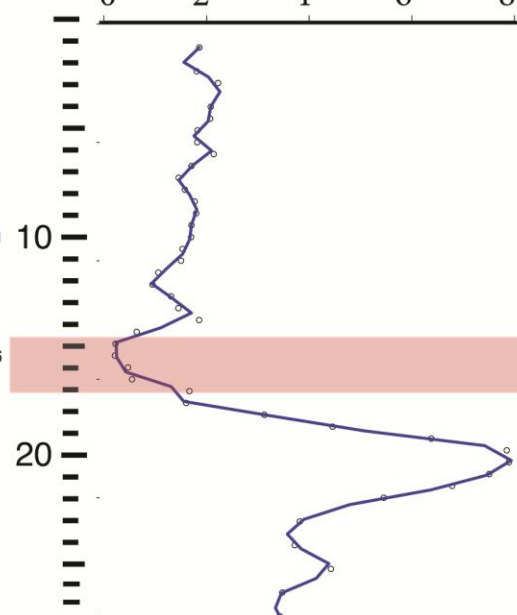
LEM13-1C-1G



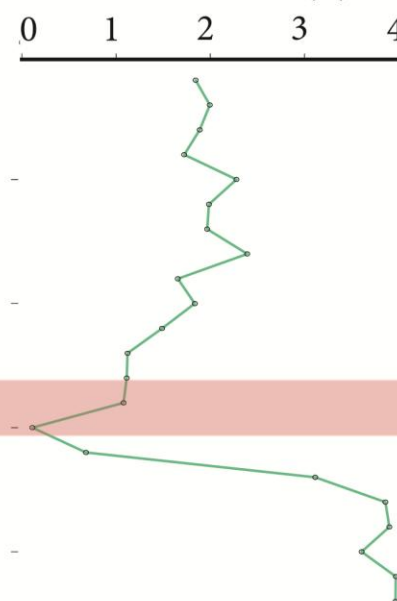
(cm) D1 D2 D3 T1 T2

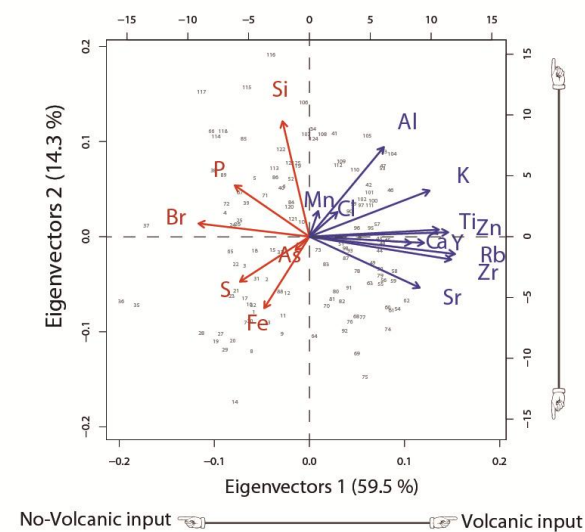
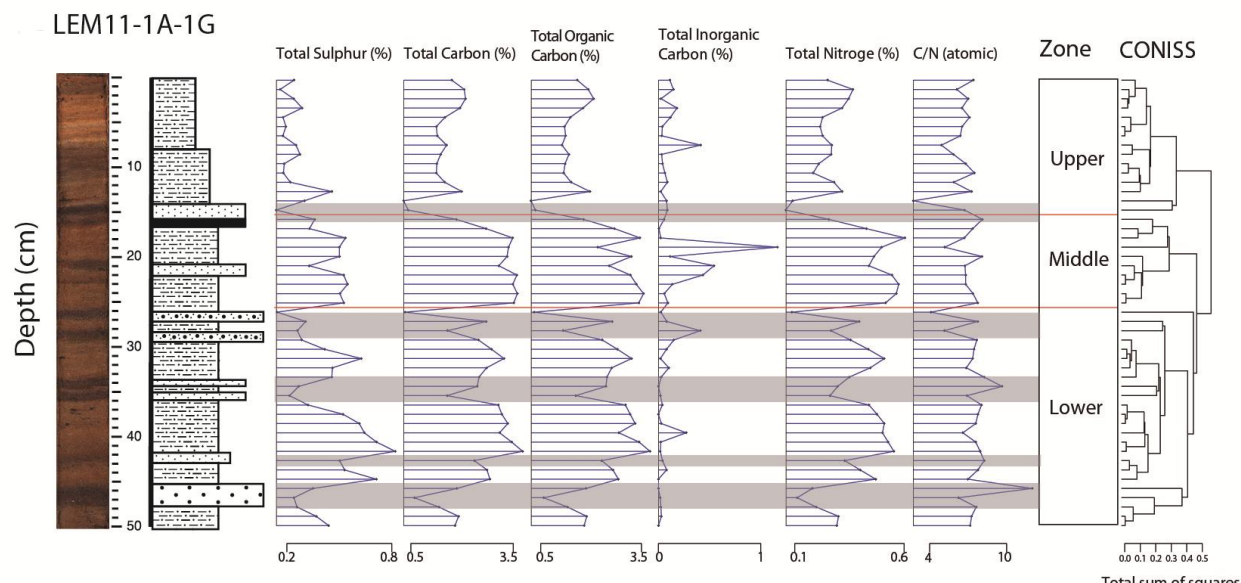
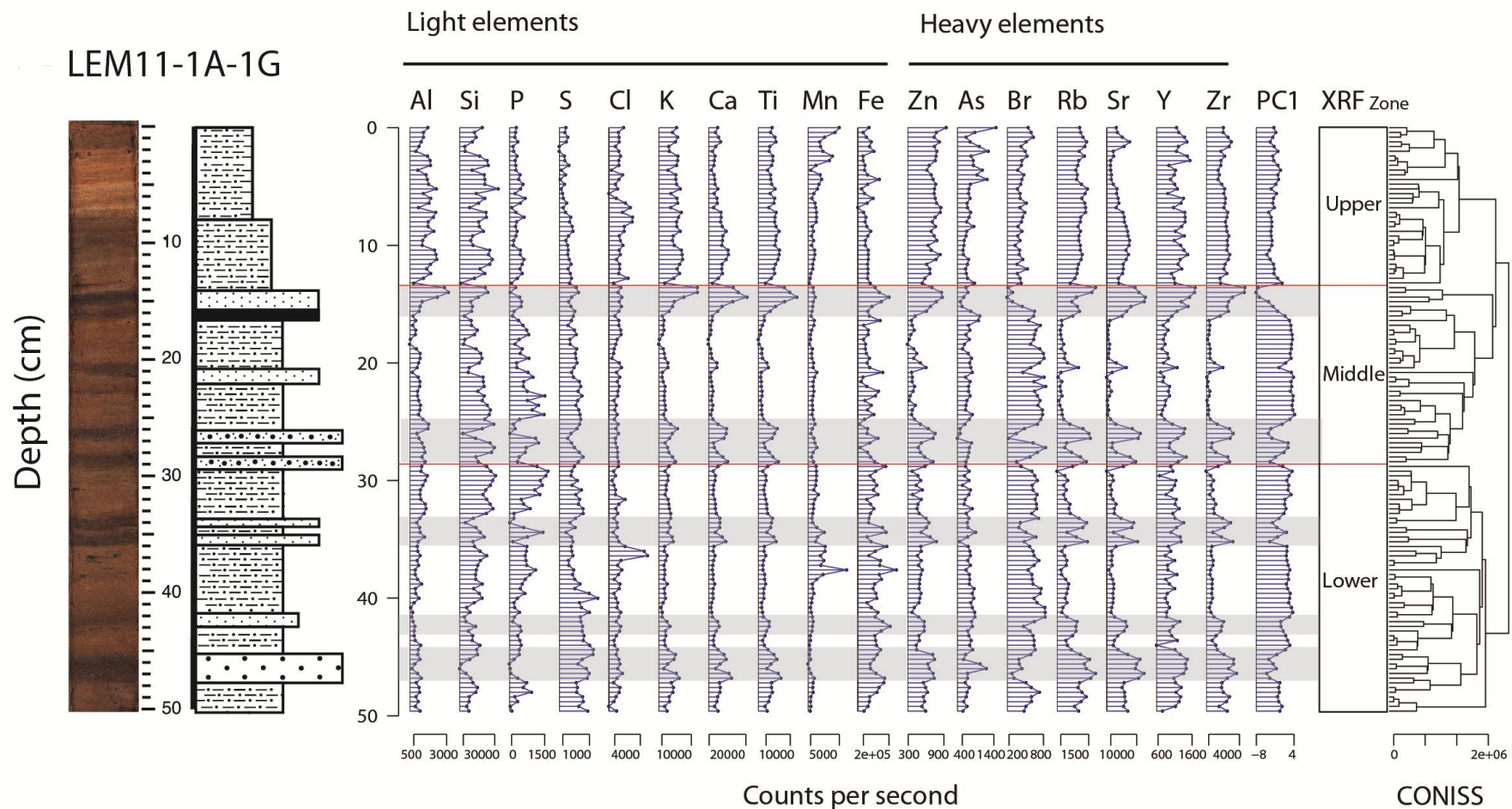


(cm) LEM12-3A-1G TOC(%)



LEM12-3B-1G TOC(%)

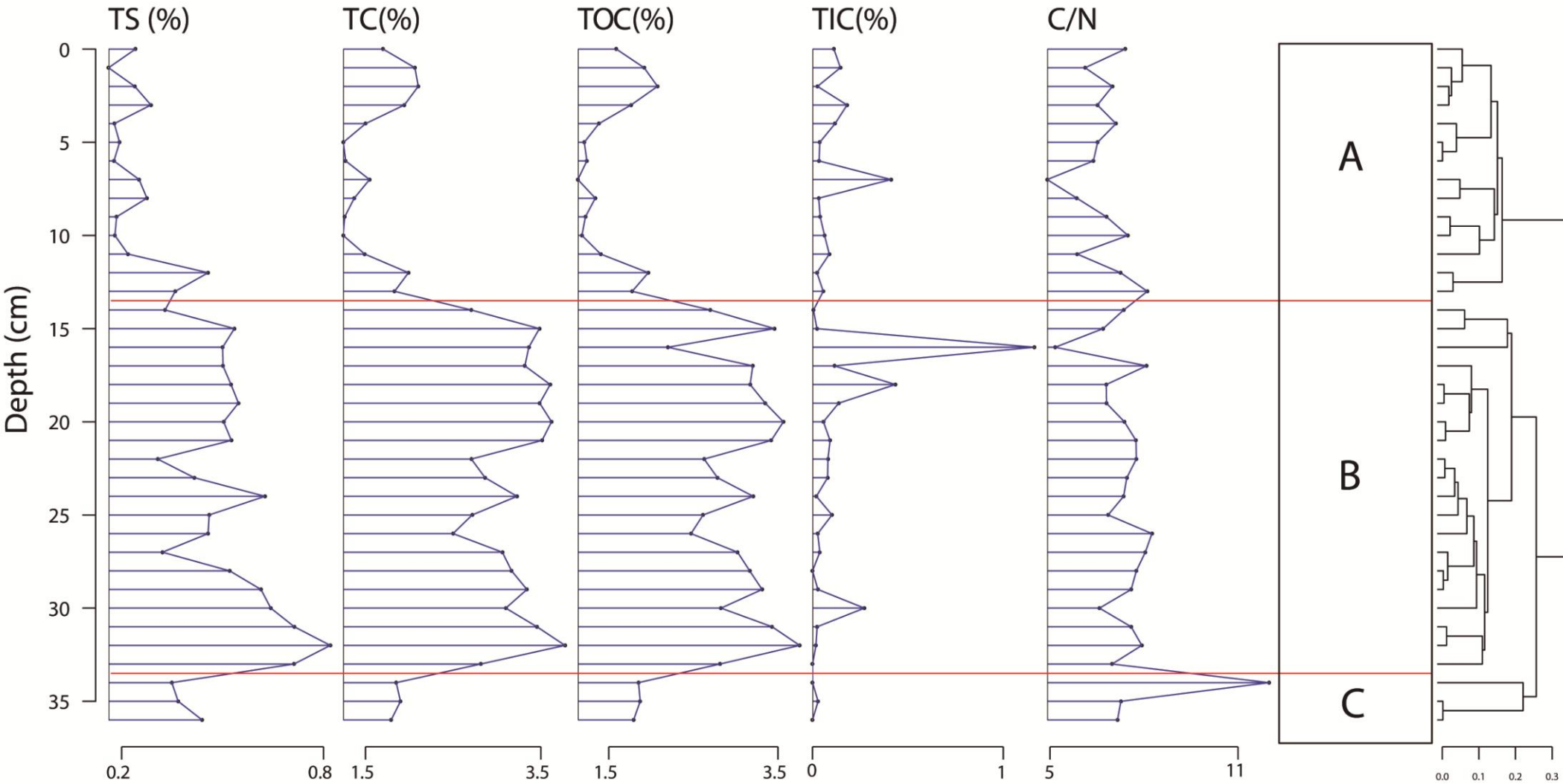


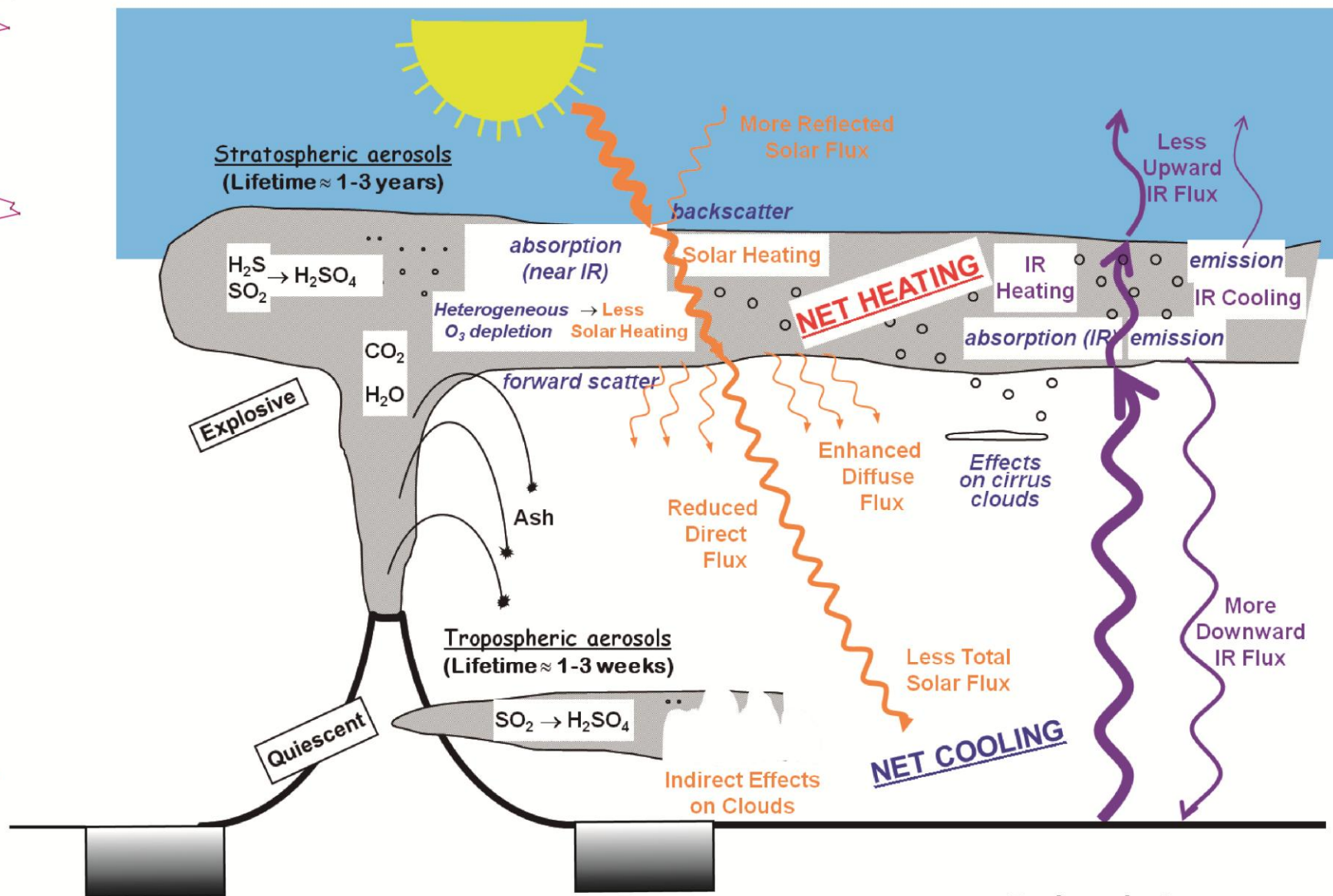
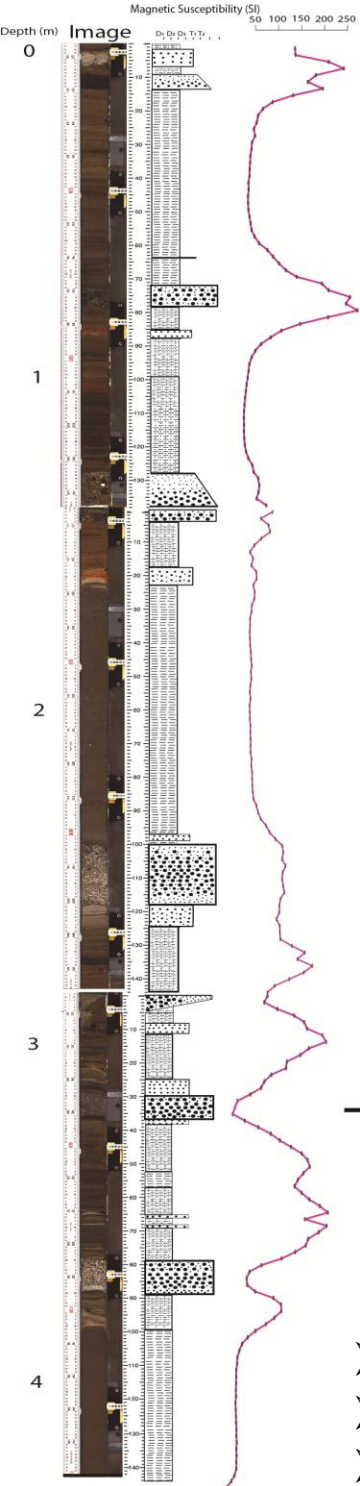




Eliminando las tefras y/o eventos de deposición “instantáneas”

## Carbon–Sulphur–Nitrogen Data

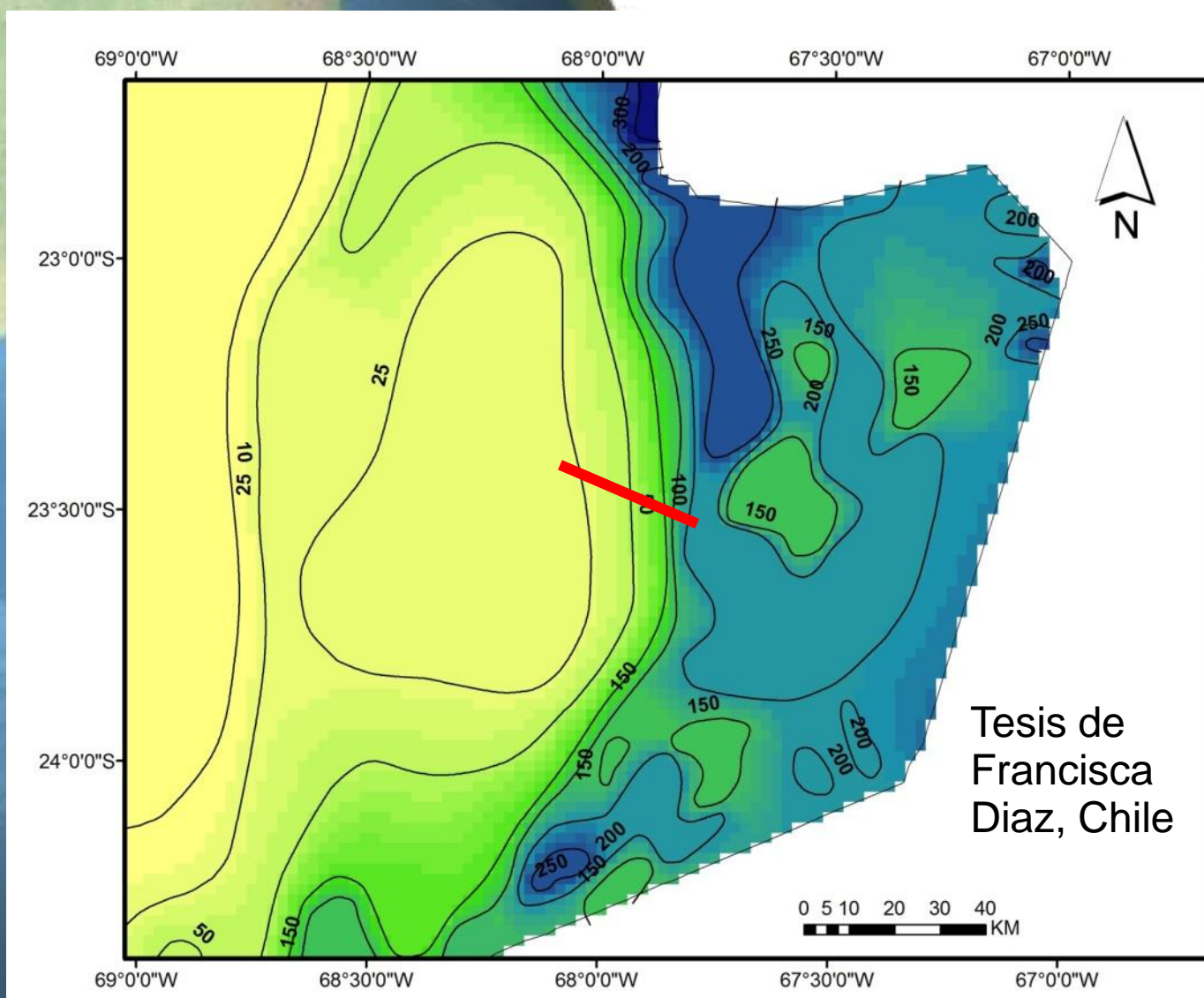




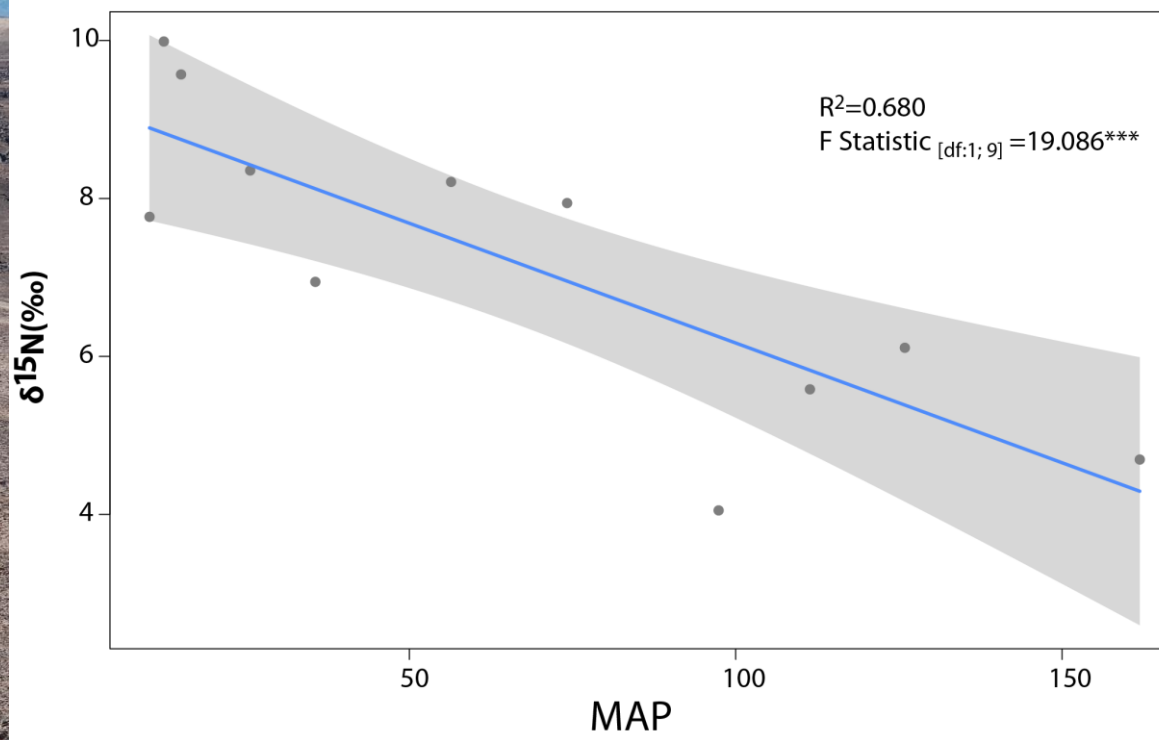
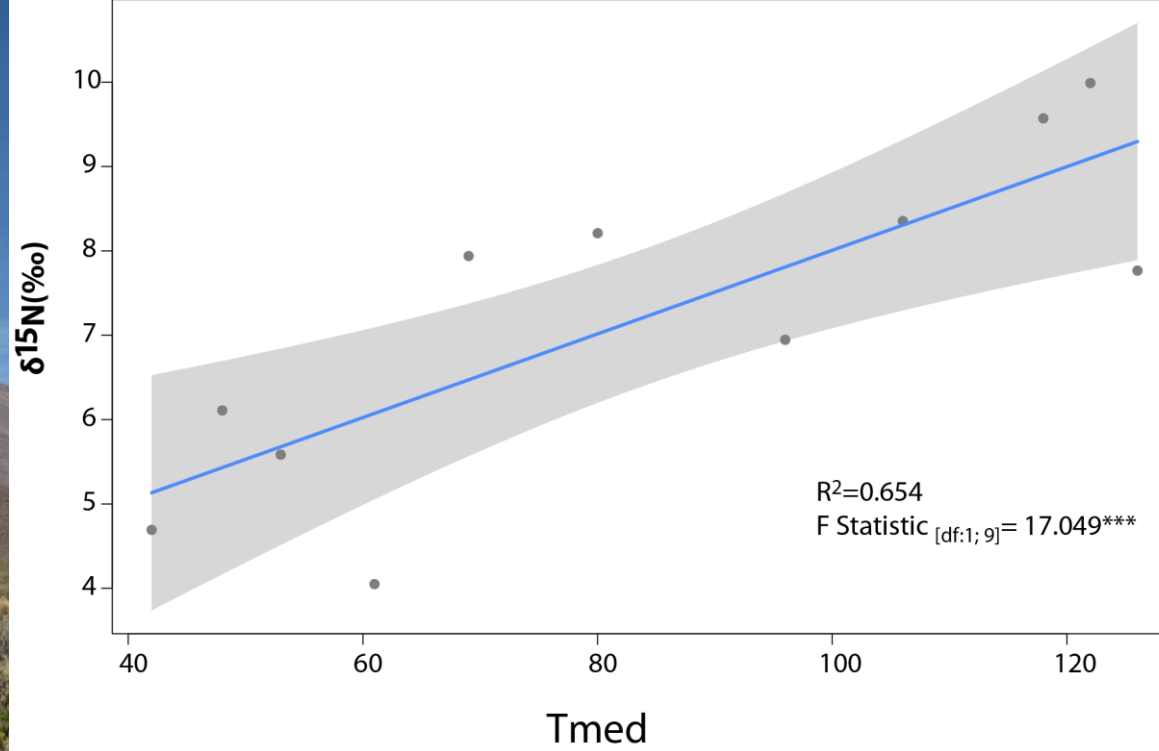
- más de 17 eventos volcánicos en 5 metros de sedimento...
- eventos locales, regionales, globales??
- Todos Pos glaciales??



# TRANSECTO ALTITUDINAL EN EL DESIERTO DE ATACAMA

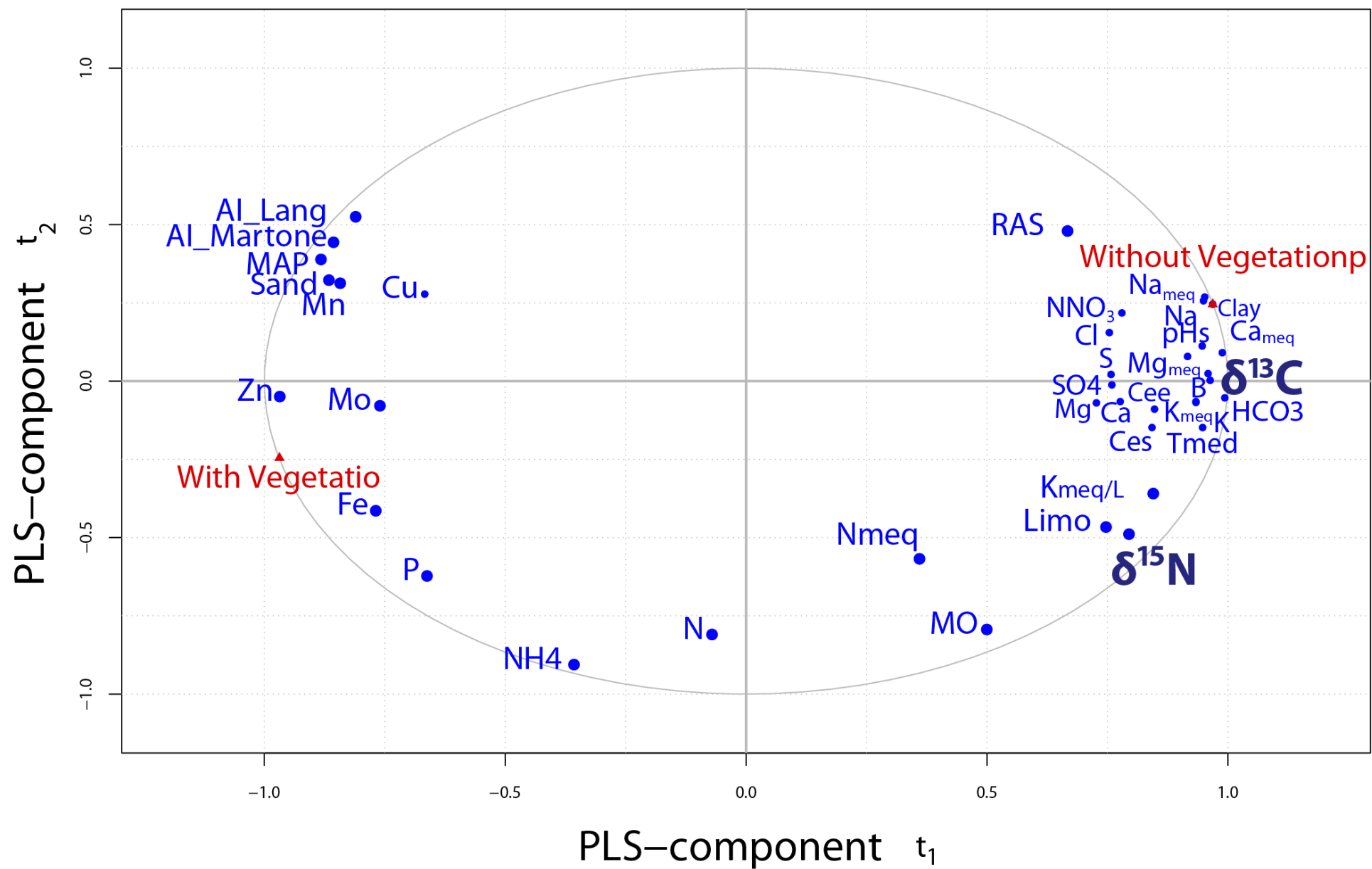


MARZO 2011

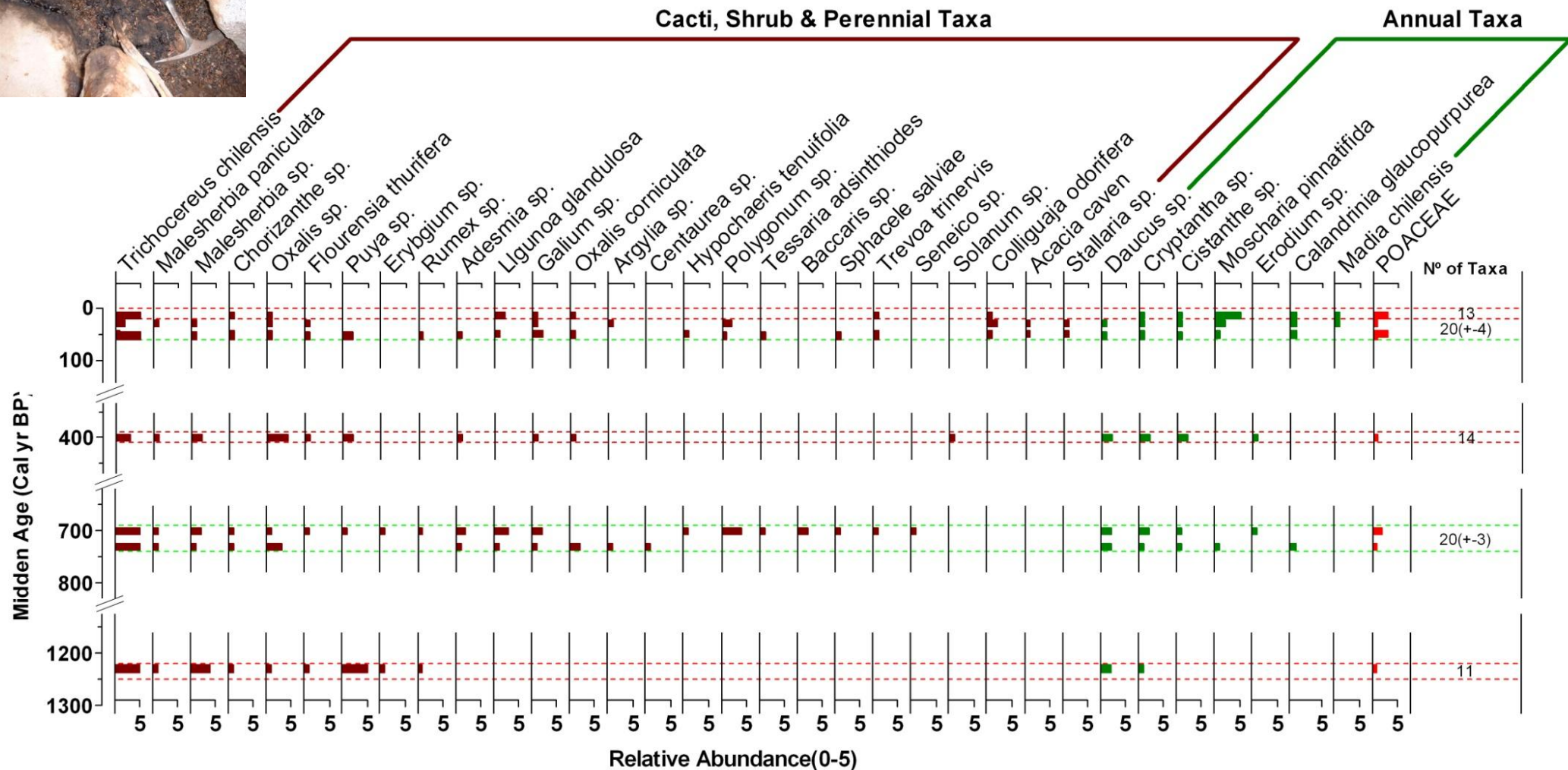




Circle of Correlations on  $t_1, t_2$

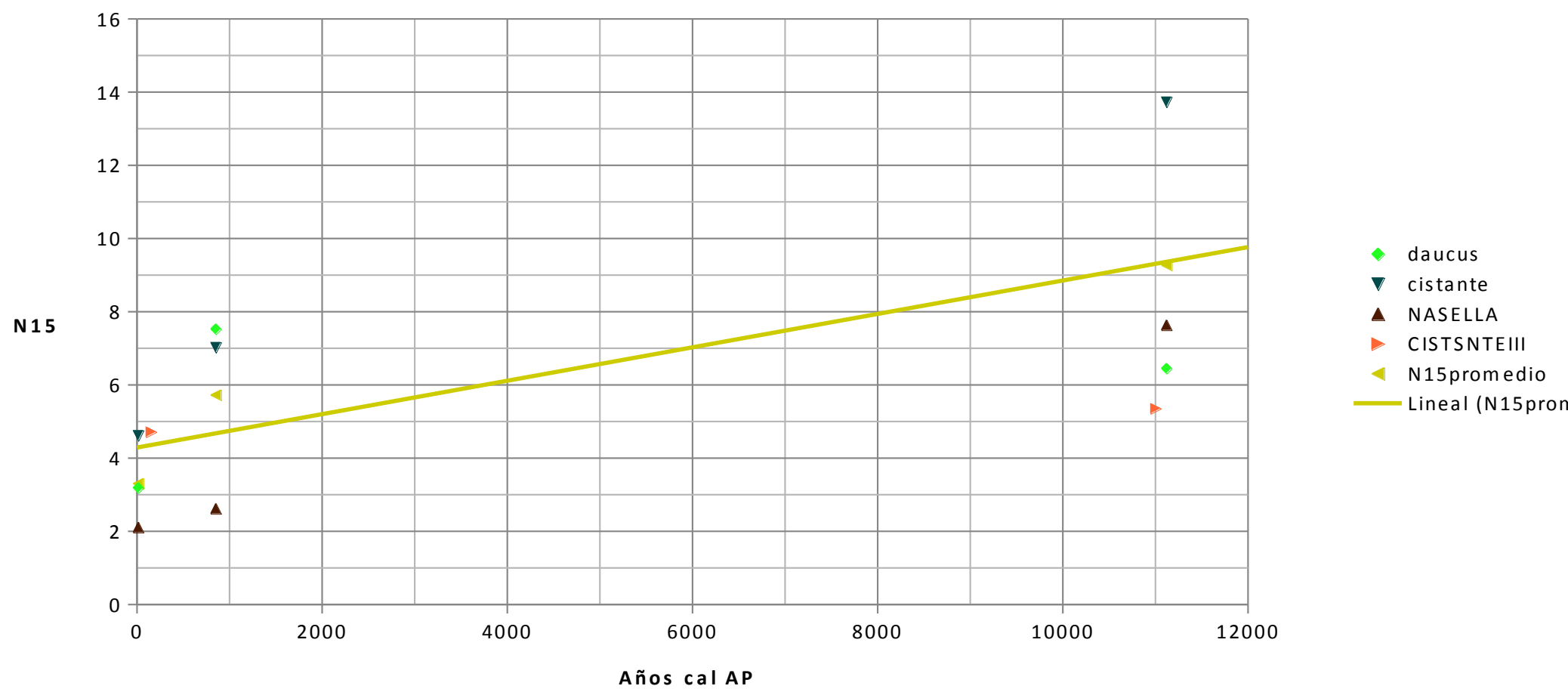
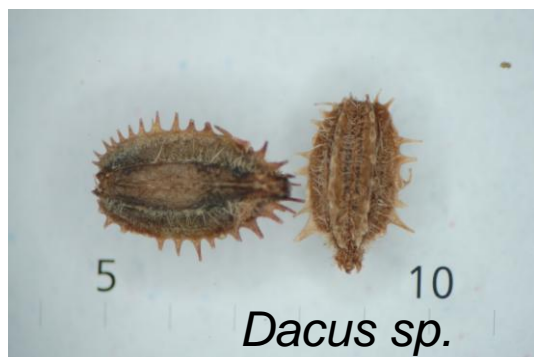


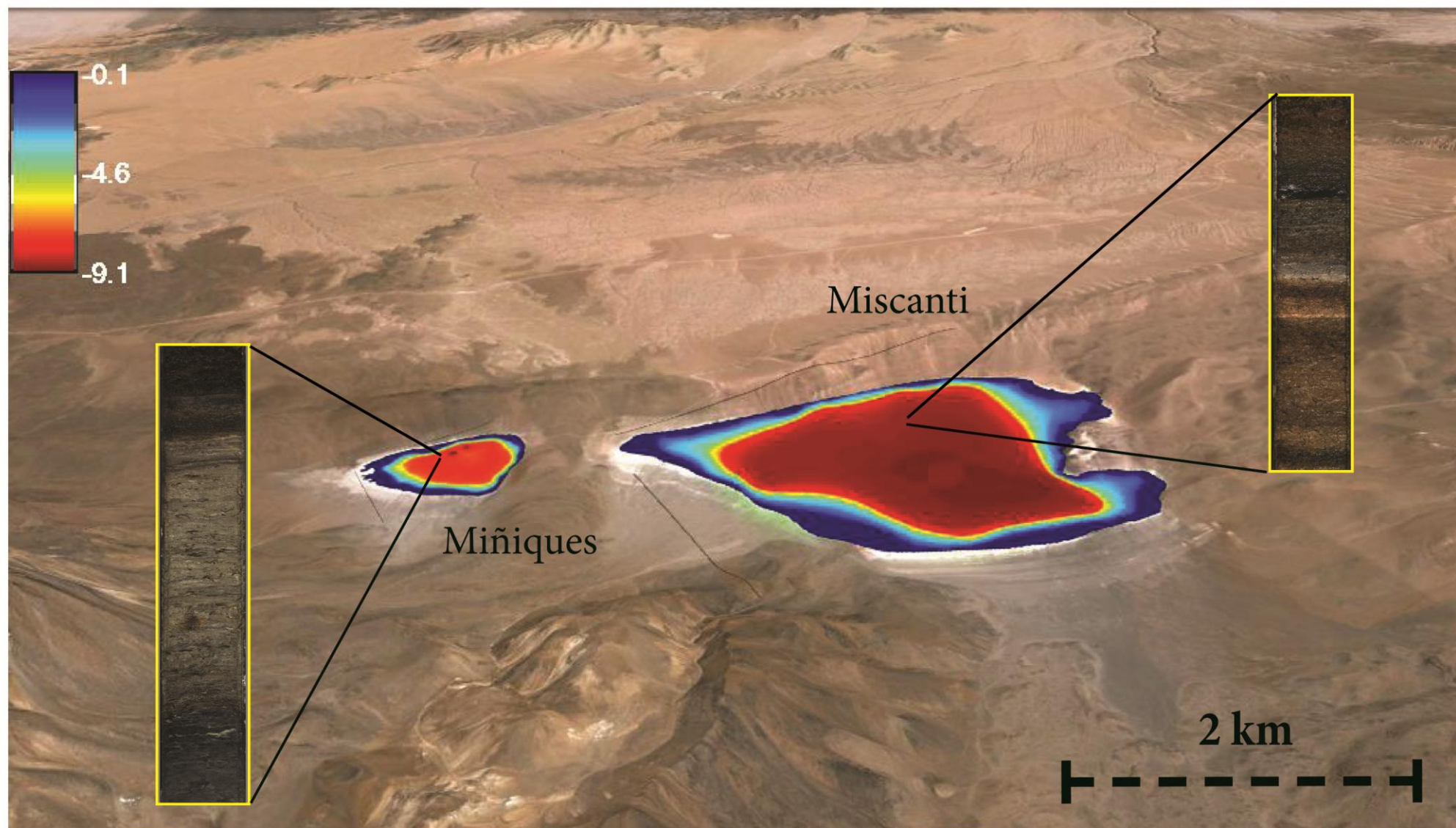
# Vegetation changes in the semiarid matorral of Central Chile (31°S) gleaned from rodent middens



Periods of very low plant richness occur at ca. 1250 and 400 cal yr BP



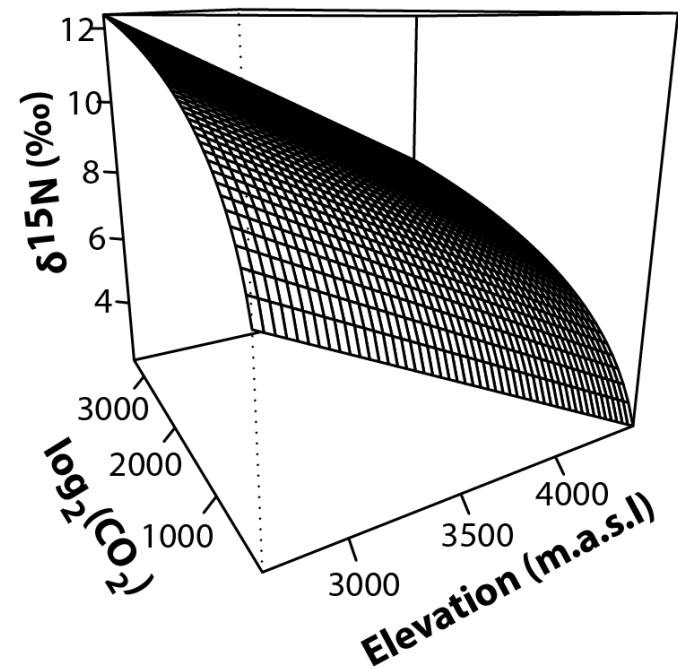
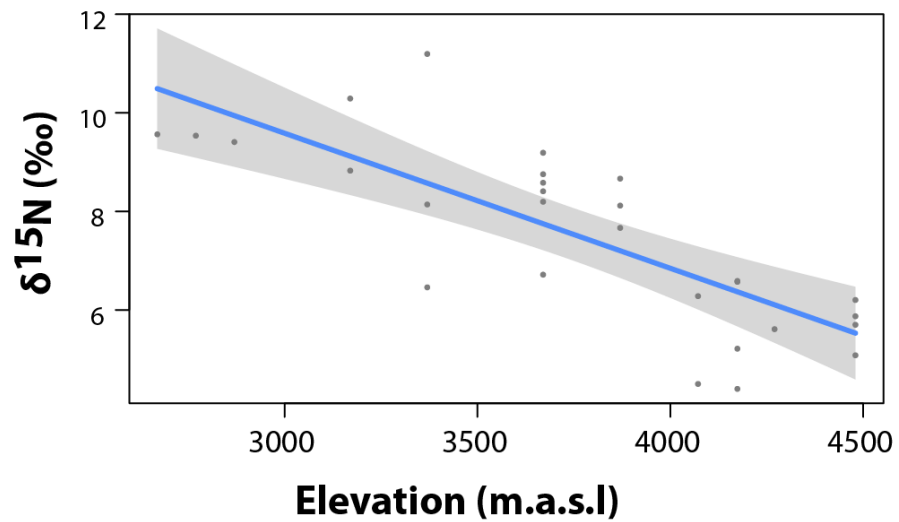
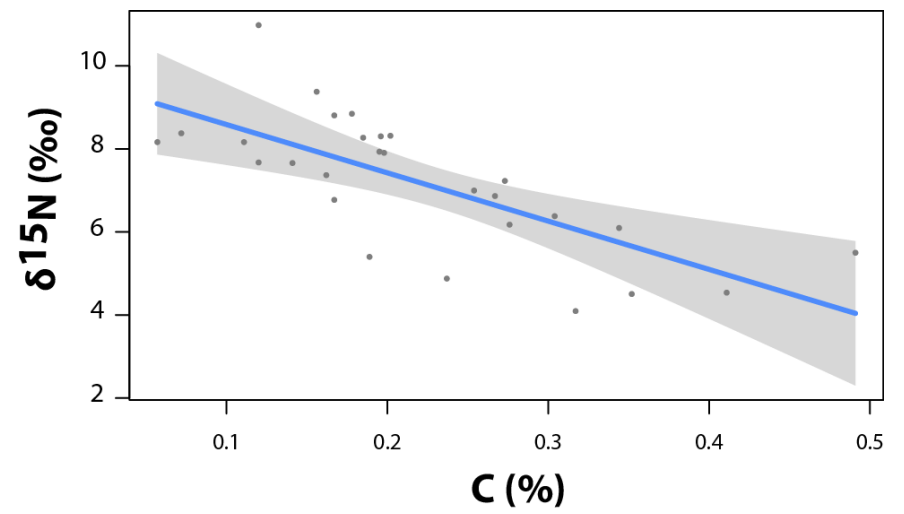
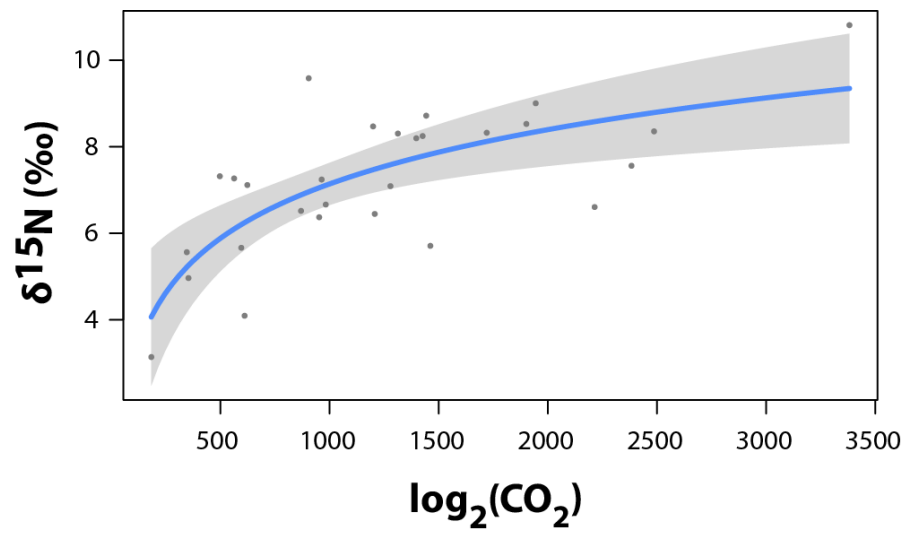






GRACIAS POR TODOS...





$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon$$

$R^2 = 0.693$ .

F Statistic = 21.338\*\*\* (df = 3; 24).



